Claims

1. Method for transmitting data packets (IP) between network
   nodes (A, G) of an optical network, wherein the transmission
   capacity of a data channel (λ1) is first reserved and data
   packets (IP) aggregated in a data burst (BURST1) are then
   transmitted,
   characterized in that,
   after transmission of the data burst (BURST1) the data
   connection (A - G) via the data channel (λ1) is retained and
   during this consecutive phase (CPH) further data packets are
   transmitted between the network nodes (A, G) and
   the connection is only terminated when the existing data
   channel (λ1) is at least partly required for transmitting a
   data burst (BURST2) of another connection (D - E).

2. Method according to claim 1,
   characterized in that
   a request (REQ) to reserve transmission capacity / a data
   channel (λ1) is sent by a reservation-requiring network node
   (D) via switching devices (S4, S5) of the optical network to
   an end node (E).

3. Method according to claim 2,
   characterized in that
   transmission capacity / a data channel (λ1) for a new
   connection (D - E) is only reserved during the consecutive
   phase (CPH).

4. Method according to claim 2 or 3,
   characterized in that
   a disconnect signal (DISC) is transmitted via the switching

devices (S4, S1) present in the connection path (A - G) to
the end node (A) that is using the required connection in
the consecutive phase (CPH) for transmitting data.

5. Method according to claim 2,
   characterized in that
   transmission capacity is reserved according to a two-way
   reservation OBS principle by means of request and
   acknowledgment.

6. Method according to claim 5,
   characterized in that
   transmission capacity / transmission channels are reserved
   for bidirectional connections.

7. Method according to claim 6,
   characterized in that,
   to reserve transmission capacity for a new connection (D -
   E), the disconnect signal (DISC) is sent to both network end
   nodes (A,G) of a connection (A - G) via the switching
   devices (S4, S5) present in the connection path (A - G).

8. Method according to claim 4 or 7,
   characterized in that
   a disconnect signal (DISC) is only sent when an
   acknowledgment (ACK) is issued by the end node (E) receiving
   a request (REQ) to reserve transmission capacity.